

Listing of Claims:

1. (currently amended) A hard armor composite, comprising:

(a) a rigid non-ceramic, ~~non-perforated~~ facing comprising high-performance fibers having a tensile strength greater than 7 grams per denier and at least one non-ceramic element selected from a group consisting of glass fiber, carbon fiber, silicone-carbide, and graphite; and said high-performance fibers and said non-ceramic element being arranged in a structure selected from a group consisting of woven layers, non-woven unidirectional layers, knit layers, a three-dimensionally knit structure, and a three-dimensionally woven structure;

(b) a ballistic fabric backing carried by said facing, and comprising an array of bundled high-performance fibers, said fibers having a tensile strength greater than 7 grams per denier and a denier per filament ratio of less than 5.4; and

(c) said rigid facing and fabric backing having a combined thickness of less than 0.900-inches, and an areal density of no more than 5.1 pounds per square foot.

2. (original) A hard armor composite according to claim 1, wherein said fabric backing comprises a plurality of overlying fabric layers.

3. (original) A hard armor composite according to claim 2, wherein said fabric layers are laminated under heat and pressure to form a unitary ballistic structure.

4. (original) A hard armor composite according to claim 1, and comprising means for adhering said fabric backing to said facing.

5. (original) A hard armor composite according to claim 4, wherein said means for adhering comprises an adhesive selected from the group consisting of a thermoplastic polymer resin matrix and a thermosetting polymer resin matrix.

6. (original) A hard armor composite according to claim 4, wherein said means for adhering comprises a polymer film.

7. (original) A hard armor composite according to claim 4, wherein said means for adhering comprises an adhesive selected from the group consisting of an epoxy adhesive, a polysulfide adhesive, a polyurethane adhesive, a phenolic adhesive, a polyester adhesive, a polyvinyl butyral adhesive, a polyolefin adhesive, and a vinyl ester adhesive.

8. (original) A hard armor composite according to claim 1, wherein said rigid facing is constructed of a material selected from the group consisting of steel, glass, aluminum, titanium, and graphite.

9. (original) A hard armor composite according to claim 1, wherein said high-performance fibers are selected from the group consisting of aramid, ultra-high molecular weight polyethylene (UHMWPE), poly {p-phenylene-2, 6-benzobisoxazole} (PBO), and poly {diimidazo pyridinylene (dihydroxy) phenylene} (M5).

10. (original) A hard armor composite according to claim 1, wherein said rigid facing comprising a generally flat, continuous monolithic plate.

11. (cancelled)

12. (cancelled)

13. (currently amended) A hard armor composite, comprising:

(a) a rigid non-ceramic, ~~non-perforated~~ facing comprising high-performance fibers having a tensile strength greater than 7 grams per denier and at least one non-ceramic element selected from a group consisting of glass fiber, carbon fiber, silicone-carbide, and graphite; and said high-performance fibers and said non-ceramic element being arranged in a structure selected from a group consisting of woven layers, non-woven unidirectional layers, knit layers, a three-dimensionally knit structure, and a three-dimensionally woven structure;

(b) a ballistic fabric backing carried by said facing, and comprising an array of bundled high-performance fibers, said fibers having a tensile strength greater than 7 grams per denier and a denier per filament ratio of no more than 2.0; and

(c) said rigid facing and fabric backing having a combined thickness of less than 0.900-inches, and an areal density of no more than 5.1 pounds per square foot.

14. (cancelled)

15. (original) A hard armor composite according to claim 13, and comprising means for adhering said fabric backing to said non-ceramic facing.

16. (original) A hard armor composite according to claim 15, wherein said means for adhering comprises an adhesive selected from the group consisting of an epoxy adhesive, a polysulfide adhesive, a polyurethane adhesive, a phenolic adhesive, a polyester adhesive, a polyvinyl butyral adhesive, or a polyolefin adhesive, and a vinyl ester adhesive.

17. (original) A hard armor composite according to claim 13, wherein said non-ceramic facing comprises a generally flat, continuous monolithic plate.

18. (cancelled)

19. (cancelled)

20. (original) A hard armor composite according to claim 13, wherein said high-performance fibers are selected from the group consisting of aramid, ultra-high molecular weight polyethylene (UHMWPE), poly {p-phenylene-2, 6-benzobisoxazole} (PBO), and poly {diimidazo pyridinylene (dihydroxy) phenylene} (M5).